

REMARKS

The Official Action of May 17, 2005 has been carefully considered and reconsideration of the application is respectfully requested.

The claims have been amended to remove the bases for the rejections under 35 USC 112, second paragraph appearing at paragraph 2 of the Official Action, and more clearly to distinguish over the art cited at paragraphs 3-9 of the Official Action. In particular, the recitations formerly in claim 1 have been incorporated into claim 2. The recitations formerly in claims 1 and 9 have been incorporated into claim 6 with the exception that DTPA has been deleted from the recited Markush group of chelating agents. The recitations formerly in claims 1 and 9 have been incorporated into claim 8 with the exception that DHEG has been deleted from the recited Markush group of chelating agents. The recitations formerly in claims 1 and 9 have been incorporated into claim 7. As a result of the amendments, independent claims 2, 6, 7 and 8 are present in the application. These independent claims are patentably distinguishable over the cited art as next discussed.

Claim 2

Claim 2 stands rejected under 35 USC 103(a) as allegedly being unpatentable over each of Ichizawa et al (paragraph 6 of the Official Action); Lin (paragraph 7 of the Official Action); and Yeh (paragraph 8 of the Official Action). Applicant respectfully traverses these rejections.

As discussed in the specification at page 4, a problem may arise in an ink composition comprising a dispersion of a pigment: the dispersion can coagulate by virtue of hardness components such as calcium and magnesium that originate from the pigment. In general, ethylenediamine tetraacetic acid (EDTA) salts may be used to reduce the influence of hardness components, but this causes problems (see paragraph bridging pages 4 and 5 of the Official Action). Applicants have discovered that, in an ink composition wherein the colorant comprises the recited pigment dispersion, the use of nitrilotriacetic acid (NTA) or a salt thereof as a chelating agent has advantageous effects as compared with the use of EDTA.

This is shown by the results of the experimentation described in the specification at Table 1 on page 36, wherein the inks of the Examples 1-8 comprising nitrilotriacetic acid (NTA) disodium salt (see description of Examples A1-A8 in the specification at pages 33-35) are compared with the inks of the comparative examples comprising ethylenediamine tetraacetic acid disodium salt (see specification at page 35, last paragraph). From the results in Table 1, it can be seen that the ink compositions comprising the NTA salt performed better than the ink compositions comprising the EDTA salt in that, for example, the storage stability did not drop when the amount added was higher than needed to achieve the best results (see specification at page 35, last paragraph for a description of the evaluation criteria "A-D").

From the results in Table 1, it may be appreciated that the type of chelating agent used in the ink composition defined in claim 2 is a result-effective variable. The result-effective nature of this variable is not recognized in the cited references, which do not show or suggest that any

advantage can be achieved through the use in an ink composition of any particular chelating agent (as opposed to any other) or of a chelating agent other than EDTA (see Lin at column 19, lines 59-66; Ichizawa et al at column 12, lines 38-46; and Yeh et al at paragraph [0070]). Accordingly, it is respectfully submitted that the cited art is not sufficient to set forth even a *prima facie* case of obviousness for the invention defined in claim 2 (see *In re Antonie*, 559 F.2d 618, 195 USPQ 6 (CCPA 1977)). Moreover, even assuming for the sake of argument that the cited art did set forth a *prima facie* case of obviousness, it is respectfully submitted that the evidence of record in the specification as to the advantages of claimed chelating agents could not have been expected from the cited art, as discussed above, and would be sufficient to rebut such alleged *prima facie* case.

Claim 6

Claim 6 stands rejected under 35 USC 102(e) as allegedly being anticipated by Lee et al (paragraph 4 of the Official Action) or under 35 USC 103(a) as allegedly being unpatentable over each of Ichizawa et al (paragraph 6 of the Official Action), Lin (paragraph 7 of the Official Action) and Yeh et al (paragraph 8 of the Official Action). Applicant respectfully traverses these rejections.

First, with respect to the rejection under 35 USC 102(e), Applicant respectfully notes that the cited Lee et al reference teaches a composition comprising the described organo-phosphonic acid, such as HEDP, wherein the organo-phosphonic acid is present in an amount

sufficient to prevent adhesive swell. As described in the reference at column 2, lines 44-48, this amount is, in the broadest of the described ranges, at least 0.5 wt %. In contrast, in the ink composition defined in claim 7, the claimed chelating agents are present in an amount of up to 0.1 wt%. Accordingly, it is clear that the cited art does not show or suggest at least this claim limitation such that the cited art cannot anticipate or render obvious the claimed invention for at least this reason.

With respect to the rejections under 35 USC 103(a), Applicant respectfully calls the Examiner's attention to the results of the experimentation described in the specification at Table 6 on page 52 of the specification, wherein the results of the storage stability test with the inks of the Examples B1-14 are provided. (The inks of these Examples are described in the specification at pages 47-51 and the storage stability test is described in the paragraph bridging pages 51-52.) From the results in Table 6, it can be seen that, by adding one of the chelating agents recited in claim 6, excellent results are achieved in the described evaluation for storage stability. When these results are compared with the results for inks of the comparative examples comprising ethylenediamine tetraacetic acid disodium salt (see Table 1 on page 36 of the specification), it can be seen that the ink compositions comprising the recited chelating agents perform better than the ink compositions comprising the EDTA salt in that, for example, the storage stability does not drop when the amount added is higher than needed to achieve the best results.

From the results of the comparison between Table 6 and Table 1, it may be

appreciated that the type of chelating agent used in the ink composition defined in claim 6 is a result-effective variable. The result-effective nature of this variable is not recognized in the cited references, which do not show or suggest that any advantage can be achieved through the use in an ink composition of any particular chelating agent (as opposed to any other) or of a chelating agent other than EDTA (see Lin at column 19, lines 59-66; Ichizawa et al at column 12, lines 38-46; and Yeh et al at paragraph [0070]). Accordingly, it is respectfully submitted that the cited art is not sufficient to set forth even a *prima facie* case of obviousness for the invention defined in claim 6 (see *In re Antonie*, 559 F.2d 618, 195 USPQ 6 (CCPA 1977)).

Moreover, even assuming for the sake of argument that the cited art did set forth a *prima facie* case of obviousness, it is respectfully submitted that the evidence of record in the specification of unexpectedly advantageous results with the claimed chelating agents, as discussed above, would be sufficient to rebut such *prima facie* case.

Claim 8

Claim 8 stands rejected under 35 USC 103(a) as allegedly being unpatentable over each of Ichizawa et al (paragraph 6 of the Official Action) and Yeh et al (paragraph 8 of the Official action). Applicant respectfully traverses these rejections for the same reasons as discussed above with respect to claim 6. In addition, Applicant respectfully notes that neither of the cited references shows or suggests any of the chelating agents in the recited Markush group of chelating agents in amended claim 8. Accordingly, it is respectfully submitted that the references do not set forth even a *prima facie* case of obviousness for the invention defined in


claim 8 for this reason as well.

Claim 7

Claim 7 stands rejected under 35 USC 103(a) as allegedly being unpatentable over Ichizawa et al, Lin or Yeh et al in view of Parliment. Applicant respectfully traverses this rejection for the same reasons as discussed above with respect to claim 6. Indeed, insofar as the reference teaches that gluconic acid or citric acid complexing agents are “art recognized equivalents” of ethylene-diamine tetraacetic acid (see Parliment at column 2, lines 59-66), it reinforces the unexpected nature of Applicant’s finding of the result-effectiveness of the chelating agent used in the claimed compositions.

All of the other claims of record depend, either directly or indirectly, from the above claims and are patentable over the cited art for the reasons discussed.

In view of the above, it is respectfully submitted that all of the objections and rejections of record have been overcome and that the application is now in allowable form. An early notice of allowance is earnestly solicited and is believed to be fully warranted.

Respectfully submitted,
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